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THE Chemist



APRIL, 1947



VOLUME XXIV, No. 4

Annual Meeting Program	130
Proposed By-Laws for Institute	131
Chemists' Registration Act of Ohio	141
The Defense of Animal Research	151
Necrology	152
Council	153
Chapters	155
For Your Library	157
Chemical Condensates	162
Professional Services	163
Meeting Dates	164

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Sulfate (SO ₄)	0.000
Subst. Reduc. KMnO ₄ (as H ₃ PO ₄)	0.02
Arsenic (As)	0.000000
Heavy Metals (as Pb)	0.000

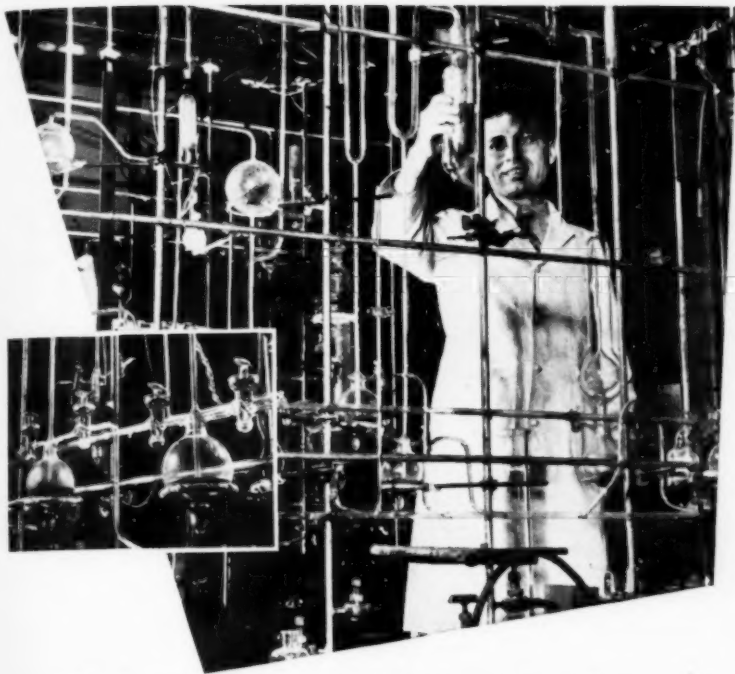
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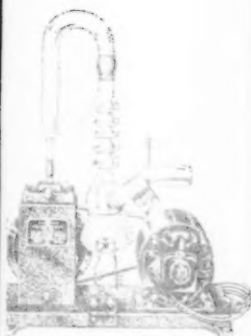
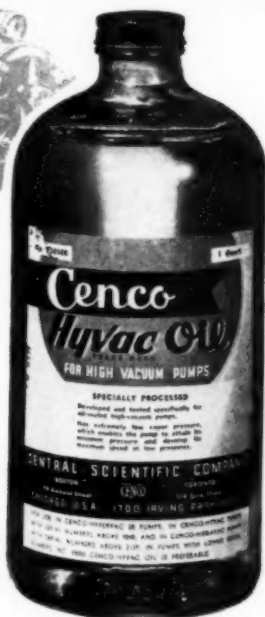
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The Chemist

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24th Annual Meeting

The American Institute of Chemists
The Hotel Commodore, New York, N. Y.

FRIDAY, MAY 2, 1947

PROGRAM

- 9:30 A.M.—Registration (Registration Fee \$1.00) East Ballroom.
10:00 A.M.—Business Meeting. Discussion of Coalition. East Ballroom.
11:30-1:30 P.M.—Meeting and Luncheon of the National Council.
2:00-5:00 P.M.—Annual Meeting. East Ballroom.
President's Address, Dr. Foster D. Snell.
"The Professional Status of the Chemist in England", Dr. L. A. Jordan, Director, Paint Research Station, Teddington, Middlesex, England.
"The Professional Status of the Chemist in Canada", Dr. R. R. McLaughlin, Head of the Department of Chemical Engineering, University of Toronto, Canada.
"The Professional Status of the Chemist in the United States", Dr. Clifford F. Rassweiler, Vice President, Research and Development, Johns Manville Company.
3:40 P.M.—Annual Business Meeting. A.I.C. Committee Reports. Election of Councilors. New Business. Adjournment.
6:15 P.M.—Reception and Cocktail Party to the Medalist, Dr. M. L. Crossley. West Ballroom.
7:00 P.M.—Medal Award Banquet. East Ballroom.
Toastmaster:
Dr. Foster D. Snell, President of The American Institute of Chemists.
"Crossley As I Know Him":
Dr. Henry M. Wriston, President of Brown University.
"The Scientific Achievements of Dr. Crossley":
Dr. Arthur J. Hill, Director of Sterling Chemistry Laboratory, Yale University.
Medal Presentation:
Dr. Foster D. Snell.
Acceptance Address:
"Research and Human Welfare", Dr. M. L. Crossley, Director of Research, American Cyanamid Company.

Reservations for the Annual Meeting should be made to:

THE AMERICAN INSTITUTE OF CHEMISTS,
60 East 42nd Street, New York 17, N. Y.

Proposed By-Laws for Institute

IF the proposed coalition of THE AMERICAN INSTITUTE OF CHEMISTS and The American Chemical Society is consummated, the Institute will operate under a set of By-laws, as the Institute of The American Chemical Society.

To prepare these By-laws, a committee, consisting of Dr. Harry L. Fisher, chairman; Lawrence H. Flett, and Howard S. Neiman, was appointed by the Council. This committee presented tentative By-laws at the March fourth meeting of the National Council. Additional suggestions from officers and councilors were incorporated into these proposed By-laws, which, in the form which follows, are being presented to the Council of the American Chemical Society at its meeting in April.

BY-LAWS

THE INSTITUTE OF THE AMERICAN CHEMICAL SOCIETY

Article I

Name and Object

SEC. 1. The name of this Division shall be the Institute of the American Chemical Society. In these By-laws it is referred to as the Institute.

SEC. 2. The objective of the Institute shall be the advancement of

the professions of chemistry and chemical engineering.

Article II Membership

SEC. 1. The membership of the Institute shall consist of Members, Associates, Life Members and Honorary Members.

SEC. 2. All Members of the Institute shall be citizens of the United States of America.

SEC. 3. Members shall be members of the American Chemical Society who also

- (a) have completed a minimum of six years of collegiate and postgraduate work in chemistry or chemical engineering, at least two years of which must be of an advanced nature, in educational institutions approved by the Board of Governors of the Institute, and have had an additional five years of progressive experience, and responsibility in the practice of the profession, satisfactory to the Board of Governors; or
- (b) have established a reputation for themselves by some outstanding chemical work, publications, patents, editorials or other valuable contributions,

satisfactory to the Board of Governors; or

- (c) hold positions which require the direction of chemical activities in an academic, scientific or industrial organization, satisfactory to the Board of Governors.

SEC. 4. Associates shall be (1) members of the American Chemical Society who are interested in the work of the Institute, or (2) junior members of the American Chemical Society who are interested in the work of the Institute, or (3) other reputable persons who have had four years of collegiate work in chemistry or chemical engineering, leading to a Bachelor degree, in an educational institution approved by the Board of Governors, and in addition three years of progressive experience or training in the practice of the profession, or can demonstrate to the satisfaction of the Board of Governors that they have had the equivalent thereof.

SEC. 5. The Board of Governors is empowered to consider and accept such qualifications for Members and Associates other than those set forth in Section 3 and 4 as it may deem desirable.

SEC. 6. Life members shall be those who have paid such commutation for dues as may be provided by the Board of Governors.

SEC. 7. Honorary members shall be those persons of outstanding accomplishment in chemistry or chem-

ical engineering, especially professional accomplishment, considered as meriting special recognition, who have been nominated by any officer and elected to honorary membership by the Board of Governors.

SEC. 8. Any persons desirous of becoming a member of the Institute shall apply therefor in writing on a form approved by the Board of Governors. Such application shall be considered by the Committee on Qualifications who shall submit a report thereon to the Board of Governors. Approval by the Board of Governors shall constitute election of the applicant.

SEC. 9. Any member or junior member of the American Chemical Society, upon written request to the Secretary of the Institute and payment of the required dues to the Treasurer of the Institute, shall become an Associate of the Institute.

SEC. 10. Members shall have the right to vote and to hold office. Associates who are also members of the American Chemical Society shall have the right to vote.

SEC. 11. Any member or associate shall be dropped from the roll (a) for failure to pay his dues within one year after they become due, provided that no such member shall be dropped unless he shall have received from the Treasurer of the Institute a written notice of his delinquency and shall fail to pay his back dues within a period of four weeks from the date

of such notice; or (b) for cause by two-thirds vote of the Board of Governors after written notice as to the charges preferred has been sent to the person, an opportunity to answer the same within a period of not less than four weeks after such notice has been given, and an investigation has been made.

Article III Officers

SEC. 1. The officers of the Institute shall be a President, a President-Elect, a Treasurer, a Secretary, a Board of Directors, and a Board of Governors.

SEC. 2. The Board of Directors shall be composed of the President, President-Elect, Treasurer, Secretary, and the immediate Past President.

SEC. 3. The Board of Governors shall be composed of the President, President-Elect, Treasurer, Secretary, and the two immediate Past Presidents, nine Governors-at-Large, and six Regional Representatives, one each to be elected from each of the geographical districts provided for in the By-laws of the American Chemical Society, namely:

1st DIST.—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut and Canada.

2nd DIST.—New York and New Jersey.

3rd DIST. — Pennsylvania, Delaware and Ohio.

4th DIST. — Alabama, Arkansas, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

5th DIST. — Illinois, Indiana, Michigan and Wisconsin.

6th DIST.—Alaska, Arizona, California, Colorado, Hawaii, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming.

Provided further that should the foregoing geographical districts of the American Chemical Society be rearranged by action of that Society, the new geographical districts shall be the geographical districts of the Institute. Such rearrangement, however, shall not affect the then existing term of any member of the Board of Governors of the Institute.

SEC. 4. All officers shall be Members of the Institute.

SEC. 5. The President, President-Elect, Treasurer, and Secretary, three Governors-at-Large, and the Regional Representatives shall be elected at the annual meeting, and shall hold office until their successors have been elected and installed.

SEC. 6. Except as herein provided the term of office of the officers shall

be one year. In the first election to be held after the adoption of these By-laws the three Governors-at-Large having the highest vote totals of those elected shall serve for a term of three years; the next three shall serve for a term of two years; and the next three for a term of one year. Thereafter the term of each Governor-at-Large shall be for three years. Vacancies in the offices of Governor-at-Large and Regional Representative shall be filled by the Board of Governors, any such appointees to serve until the next annual meeting.

SEC. 7. The President, President-Elect, Governors-at-Large, and Regional Representatives shall not be eligible to serve more than two successive terms in the same office or capacity.

SEC. 8. Upon retirement of the President for any reason, the President-Elect shall become President of the Institute.

SEC. 9. (a) The duties of the President, the Treasurer, and the Secretary shall be such as usually pertain to the offices they hold, and also any other duties that may be assigned by the Board of Governors. (b) The President-Elect shall function as Vice-President.

SEC. 10. The Board of Governors may elect an Executive Secretary who shall also act as an executive officer under the direction of the Board of Governors, and who also may be the Secretary.

SEC. 11. The Board of Governors is also empowered to elect or appoint such other agents or employees as it may deem necessary for the proper conduct of the affairs of the Institute.

Article IV Directors

SEC. 1. The Board of Directors shall be the legal representative of the Institute, shall have charge of the property and financial affairs of the Institute, and shall perform such duties as are prescribed by laws governing corporations. Their meetings shall be held at the call of the President or of any two Directors.

Article V Governors

SEC. 1. It shall be the duty of the Board of Governors to act as an advisory board in every matter pertaining to the policy of the Institute, to keep a record of its proceedings, and report to the Institute at each annual meeting.

SEC. 2. The Board of Governors shall adopt an annual budget estimating the revenue for the ensuing year and showing the money appropriated for the purposes of the Institute. The budget shall be submitted to the Board of Directors for approval, and upon approval shall be considered the budget for the ensuing year. No debts shall be contracted or money expended outside of the budget without the prior approval of the Board of Directors. No payments

PROPOSED BY-LAWS FOR INSTITUTE

shall be made by the Treasurer without the authority of the Board of Governors.

SEC. 3. Any member of the Board of Governors who shall be absent from his duties for three successive meetings without satisfactory excuse in writing shall be declared by the Board at its next regular meeting, to have vacated his office and the Board shall immediately appoint another member of the Institute to fill the office thus vacated until the next annual meeting.

Article VI

Manner of Nomination and Election

SEC. 1. Nomination blanks, accompanied by pertinent extracts from the By-laws and names of Members suggested by the Committee on Nominations as persons qualified for the positions to be filled, shall be sent by the Secretary to all Members at least sixty days preceding each annual meeting. These blanks shall indicate the positions to be filled. The returned blanks, which must be returned within fourteen days, shall be canvassed by two tellers appointed for that purpose by the President, who shall certify the list of nominees to the Secretary.

SEC. 2. For the election of officers, Governors, and Regional Representatives, the Secretary shall prepare and send to each Member and voting Associate at least thirty days before the annual meeting, a ballot containing a

list of three nominees for each position to be filled arranged in the order of the number of nominating votes. For the election of Governors-at-Large the ballot shall contain the names of nominees, in twice the number to be elected, arranged in the order of the number of nominating votes. To be valid, ballots must be returned within twenty days thereafter. The ballots shall be counted by two tellers appointed for that purpose by the President, and the results shall be certified to the Board of Governors. The person receiving the highest number of votes for each position shall be declared elected after the result of such balloting is confirmed by vote at the annual meeting of the Institute; thereafter it shall be certified promptly by the Secretary of the Institute to the Secretary of the American Chemical Society.

Article VII

Committees

SEC. 1. The following regular standing committees shall be appointed by the President and confirmed by the Board of Governors:

Professional Status
Economic Standing
Ethics
Qualifications

Other committees may be established by the Board of Governors or authorized by the Institute.

SEC. 2. There shall be a Committee on Nominations consisting of the three immediate Past Presidents.

SEC. 3. The President shall be *ex-officio* a member of all committees.

SEC. 4. It shall be the duty of the Committee on Professional Status to to consider such matters as may properly come before it, either as raised by the members of the committee or as assigned to it by the Board of Governors, to take such action as may have been assigned by authorization of the Board of Governors, and to make recommendations in all other matters to the Board of Governors.

SEC. 5. It shall be the duty of the Committee on Economic Standing to consider such matters as may properly come before it, either as raised by the members of the committee or as assigned to it by the Board of Governors, to take such action as may have been assigned by authorization of the Board of Governors, and to make recommendations in all other matters to the Board of Governors.

SEC. 6. The Committee on Ethics shall consider such changes as may be desirable in the code of ethics, investigate all infractions of such code, and present a full statement of findings in instances of infraction to the Board of Governors.

SEC. 7. The Committee on Qualifications shall consider the qualifications of applicants for membership in the Institute and make recommendations concerning such applicants to the Board of Governors.

SEC. 8. The Committee on Nominations shall notify the Secretary of

the Institute, at least ninety days before each annual meeting, of such members as, in its opinion, are qualified for the positions of the respective officers and governing board to be filled at the next annual meeting. The Secretary shall transmit to each member with the nomination blank, a list of such proposed names, identified as suggestions by the Committee on Nominations.

SEC. 9. The duties of all other committees shall be those indicated by the title or by the resolutions under which such committee was constituted.

Article VIII

The Medal of the Institute of the American Chemical Society

SEC. 1. A gold medal may be presented by the Institute of the American Chemical Society under conditions hereinafter set forth. This medal shall be known as the medal of the Institute of the American Chemical Society. The medal was founded in 1925 for the purpose of stimulating activities of service to the science of chemistry or the profession of chemist or chemical engineer.

SEC. 2. A Jury of Medal Award, consisting of the President, the three immediate Past Presidents, and the Secretary, shall select the recipient of the medal, but an award shall not be made oftener than once each year.

SEC. 3. Each member of the Jury of Medal Award shall have but one vote. The senior Past President on

1947

PROPOSED BY-LAWS FOR INSTITUTE

the Jury shall be the Chairman thereof, and the Secretary of the Institute shall be the Secretary of the Jury. Three members shall constitute a quorum. The vote shall be by written ballot. No votes shall be cast by proxy, but the vote may be taken by mail.

SEC. 4. The award shall be made by a majority vote of the Jury of Medal Award. The award shall be made for noteworthy and outstanding service to the science of chemistry or the profession of chemistry or chemical engineering in America.

SEC. 5. The Jury of Medal Award shall meet upon call of the chairman.

SEC. 6. The Jury of Medal Award shall have power to decide any question not specifically covered by these rules.

Article IX

Meetings of the Institute

SEC. 1. There shall be at least two meetings of the Institute each year, one at the time and place of the annual meeting of the American Chemical Society, and the other, the Medal meeting, at such time and place as shall be determined by the Board of Governors or by vote of the Institute.

SEC. 2. Notices of these meetings of the Institute shall be sent to each Member and Associate at his last known address at least thirty days before each meeting.

SEC. 3. Other meetings of the In-

stitute may be held or provided by the Board of Governors, or on written request of at least twenty-five members of the Institute, to promote the purposes of the Institute.

Article X

Meetings of the Board of Directors and the Board of Governors

SEC. 1. Meetings of the Board of Directors shall be held as provided in Article IV. For such meetings, notice shall be given by the Secretary to the Directors at least one week prior to the date of each meeting and such notice shall contain a statement of the business to be transacted.

SEC. 2. Regular meetings of the Board of Governors shall be held at such intervals as the members thereof may determine. For such meetings notices shall be given by the Secretary to the Governors at least one week prior to the date of each meeting and such notice shall contain a statement of the business to be transacted.

SEC. 3. Special meetings of the Board of Governors may be called by the President when he deems it necessary, or on written request of at least five members of the Board.

SEC. 4. In lieu of a special meeting of the Board of Governors, the President may submit any question to the Board for vote by correspondence, and any action approved in writing by not less than two-thirds of the membership of the Board shall be declared by the President an act of

the Board, and shall be recorded in the minutes of the Board.

Article XI Quorum

SEC. 1. Twenty-five persons eligible to vote at any meeting shall constitute a quorum for the transaction of any business duly presented at any regularly called meeting of the Institute.

SEC. 2. Three Directors shall constitute a quorum for all meetings of the Board of Directors.

SEC. 3. Five members of the Board of Governors shall constitute a quorum for all meetings of the Board of Governors.

Article XII Finances

SEC. 1. The following shall be the annual dues: Member, \$10.00; Associates, \$5.00; Life Members at a rate to be fixed by the Board of Governors. These dues shall include a subscription to *The Chemist* as a prerequisite of membership.

SEC. 2. Annual dues must be paid on or before March 1 of each year, or at the date of election to membership.

SEC. 3. No Member or Associate shall be entitled to vote at any meeting when his dues are sixty days in arrears.

SEC. 4. A Life Member, Member, or Associate, when elected shall be entitled to a certificate setting forth that he is a Life Member, Member, or Associate of the Institute, but no certificates shall be issued in advance

of the receipt of dues for the year in which elected. Certificates of membership shall be returned to the Secretary upon termination of membership for any cause except death.

SEC. 5. The business year of the Institute shall end December 31.

SEC. 6. The accounts of the Institute shall be audited by two auditors appointed by the Board of Governors, who shall report at each Annual Meeting. The books and accounts shall be submitted by the Treasurer for audit at least three days before the date of the Annual meeting.

Article XIII Use of Title of Member

SEC. 1. A Member of the Institute shall be entitled to describe himself as a member of the Institute of the American Chemical Society (M.I.A.C.S.).

Article XIV Forfeiture of Membership and Reinstatement

SEC. 1. A person whose membership shall have been forfeited for any cause may be reinstated on such terms and conditions as the Board of Governors may impose.

Article XV Order of Business

SEC. 1. At all regular meetings of the Board of Governors and of the Institute the order of business shall be as follows:

- a. Approval of minutes of previous meeting.
- b. Report of Secretary.

PROPOSED BY-LAWS FOR INSTITUTE

- c. Report of Treasurer.
- d. Report of Committees.
- e. Unfinished Business.
- f. Special Business.
- g. New Business.

SEC. 2. The rules of parliamentary procedure contained in *Robert's Rules of Order* shall govern all meetings of the Board of Governors and the Institute.

Article XVI The Chemist

SEC. 1. The official publication of the Institute shall be called *The Chemist*. The Editor shall be appointed by the Board of Governors.

SEC. 2. The Chemist shall be issued monthly.

SEC. 3. The subscription fee to *The Chemist* shall be two dollars (\$2.00) a year for Members and Associates of the Institute, and three dollars (\$3.00) a year for other subscribers. The subscription is included in the dues of all Members and Associates.

Article XVII

Effective Date of These By-laws

SEC. 1. These By-laws shall become effective upon their ratification by a majority of those entitled to vote at the first meeting of the Institute held following its affiliation with the American Chemical Society.

SEC. 2. Wherever in these By-laws reference is made to Past Presidents such reference as of the effective date of these By-laws shall be to Past Presidents of the American In-

stitute of Chemists, who for the purposes hereof shall be considered Past Presidents of this Institute.

Article XVIII Amendments

These By-laws may be amended in the following manner: Notice of any such amendment shall be given at a meeting of the Board of Governors but shall not be called up for action until the next successive meeting of said Board of Governors and not unless it is included in the formal notice of that meeting. If at the meeting where the vote is taken, a majority of the Board of Governors shall approve any amendment, that amendment shall then be submitted to the Council of the American Chemical Society and upon the approval by said Council it shall become effective.

Thomas Awarded I.R.I. Medal

Dr. Charles Allen Thomas, F.A.I.C., vice president and technical director of Monsanto Chemical Company, St. Louis, Missouri, has been awarded the Industrial Research Institute medal for his outstanding contribution to the field of industrial research. The medal will be presented at the annual meeting of the Research Institute to be held in June.

Colonel Jacques C. Morrell, F.A.I.C., is now vice president and general manager of Bowman Gum, Inc., 4865 Stenton Avenue, Philadelphia 44, Pennsylvania.

Sweeney Now Vice President of Standard Oil Development

The Standard Oil Development Co., has announced the election of three new vice presidents and directors: Willard C. Asbury, will be in charge of contract and patent activities; E. Duer Reeves and Dr. William J. Sweeney, F.A.I.C., will direct the company's work in research and development.

J. M. McIlvain, F.A.I.C., administrative supervisor, Research and Development Department, Atlantic Refining Company, Philadelphia, Penna., organized four round table conferences on job analysis and evaluation as applied to research personnel, at the winter meeting of the Industrial Research Institute in Chicago, February 27th and 28th.

Brooklyn College, Bedford Avenue and Avenue H, Brooklyn, N. Y. is giving a series of lectures on "Exploring the World of Atoms and Molecules." Professor Martin Meyer, F.A.I.C., spoke, February 21st, on "Let's Look into the Atom." The final lecture of the series will be given on May second by Professor Hugo Zahnd, F.A.I.C., on "What Molecules Do You Breathe?" Information on the series may be obtained from Professor Robert Ginell of the College.

Porter Transferred To London

J. M. Porter, F.A.I.C., has been transferred from the New York office of American Cyanamid Company to Cyanamid Products, Ltd., Brettenham House, Lancaster Place, London, W. C. 2, England.

Moore with Cyanamid Products

Dr. L. P. Moore, F. A. I. C., formerly with the New Products Division of the Celanese Corporation of America, is now with Cyanamid Products, Ltd., London WC 2, Eng.

Nee with Napko

John W. Nee, F.A.I.C., is now technical director of the Napko Paint and Varnish Company, Houston, Texas. He was formerly chemist in charge of the Metal Decorating Division laboratory of the Roxalin Flexible Finishes Company, Inc., Elizabeth, N. J.

Dr. Bernard L. Oser, F.A.I.C., director of Food Research Laboratories, Long Island City, New York, participated in the panel discussion on "Consumer Standards and Certification," held January 17th by the Metropolitan Long Island Chemical Association.

Dr. L. G. MacDowell, F. A. I. C., research director of the Florida Citrus Commission, succeeds Dr. Rowland B. French as chairman of the Florida Section of the American Chemical Society.

Chemists Registration Act of Ohio

This is the Bill proposed by the Ohio Chemists' Committee on Professional Practice, introduced in the General Assembly of Ohio by the Honorable Paul Barnes, of Franklin County.

H. B. 293

A Bill

TO regulate the practice of professional chemistry; creating a state board of registration for professional chemists; defining its powers and duties, also imposing certain duties upon the state and political subdivisions thereof in connection with public work; and providing penalties.

Be it enacted by the General Assembly of the State of Ohio:

SEC. 1. That in order to safeguard life, health, and property, any person practicing or offering to practice professional chemistry, shall hereafter be required to submit evidence that he is qualified so to practice and shall be registered as hereinafter provided; and it shall be unlawful for any person to practice or to offer to practice professional chemistry, in this state, or to use in connection with his name or otherwise assume, use, or advertise any title or description tending to convey the impression that he is a professional chemist, unless such person has been duly registered or exempted under the provisions of this act.

SEC. 2. The term "professional

chemist" as used in this act shall mean a person who, by reason of his knowledge of chemistry, mathematics, and other physical and natural sciences, acquired by professional education and practical experience, is qualified to engage in the practice of professional chemistry as hereinafter defined.

The term "practice of professional chemistry" as used in this act shall mean the furnishing or offering to furnish of any professional service requiring the application of chemical principles and data by any individual, firm, co-partnership, or association representing himself or itself in any way as being a chemist or chemists, including such services as consultation, investigation, evaluation, planning, development, or responsible supervision of operation in connection with materials, chemical processes, or chemical projects.

The term "board" as used in this act shall mean the state board of registration for professional chemists provided for by this act.

SEC. 3. The practice of professional chemistry is hereby declared to

constitute the practice of a profession. A state board of registration for professional chemists is hereby created whose duty it shall be to administer the provisions of this act. The board shall consist of five professional chemists, who shall be appointed by the Governor, and who shall have the qualifications required by Section 4. The members of the first board shall be appointed within thirty (30) days after this act becomes effective, to serve for the following terms: One member for one year, one member for two years, one member for three years, one member for four years, and one member for five years from the date of their appointment, or until their successors are duly appointed and qualified. Every member of the board shall receive a certificate of his appointment from the Governor and before beginning his term of office shall file with the Secretary of State his written oath or affirmative for the faithful discharge of his official duty. Each member of the board first appointed hereunder shall receive a certificate of registration under this act from said board. On the expiration of the term of any member, the Governor shall in the manner hereinbefore provided appoint for a term of five years a registered professional chemist having the qualifications required by Section 4, to take the place of the member whose term on said board is about to expire. Each member shall hold office until the expiration of the

term for which such member is appointed or until a successor shall have been duly appointed and shall have qualified.

SEC. 4. Each member of the board shall be a citizen of the United States and a resident of this State, and shall have been engaged in the practice of the profession of chemistry for at least twelve years, and shall have been in responsible charge of important chemical work for at least five years. Responsible charge of chemical teaching shall be construed as responsible charge of important chemical work.

SEC. 5. Each member of the board shall receive the sum of ten dollars (\$10.00) per diem when actually attending to the work of the board or of any of its committees and for the time spent in necessary travel; and in addition thereto, shall be reimbursed for all actual traveling, hotel and other expenses necessarily incurred in carrying out the provisions of this act.

SEC. 6. The Governor may remove any member of the board for misconduct, incompetency, neglect of duty, or for any other sufficient cause. Vacancies in the membership of the board shall be filled for the unexpired term by appointment by the Governor as provided in Section 3.

SEC. 7. The board shall hold a meeting within thirty (30) days after its members are first appointed, and thereafter shall hold at least two regular meetings each year. Special

meetings shall be held at such time as the by-laws of the board may provide. Notice of all meetings shall be given in such manner as the by-laws provide. The board shall elect or appoint annually from their members, the following officers: A chairman, a vice-chairman, and a secretary. A quorum of the board shall consist of not less than three members, and no action at any meeting shall be taken without at least three votes being in accord.

The secretary of the board shall keep a true and complete record of all proceedings of the board and may employ such clerical assistance as the board may deem necessary.

SEC. 8. The board shall adopt all necessary rules, regulations and by-laws, not inconsistent with this act and the constitutions and laws of this state or of the United States, to govern its times and places of meetings for organization and reorganization, for the holding of examinations, for fixing the length of terms of its officers, and for governing all other matters requisite to the exercise of its power, the performance of its duties, and the transaction of its business under the provisions of this act. The board shall adopt and have an official seal.

In carrying into effect the provisions of this act, the board may, under the hand of its chairman and the seal of the board, subpoena witnesses and compel their attendance, and also re-

quire the production of books, papers, documents, etc., in a case involving the revocation of registration or practicing or offering to practice without registration. Any member of the board may administer oaths or affirmations to witnesses appearing before the board. If any person shall refuse to obey a subpoena so issued, or shall refuse to testify or produce any books, papers, or documents, the board may present petition to any court of competent jurisdiction, setting forth the facts, and thereupon such court shall, in proper case, issue its subpoena to such person, requiring his attendance before such court and thereto testify or produce such books, papers, and documents, as may be deemed necessary and pertinent by the board. Any person failing or refusing to obey the subpoena or order of the said court may be proceeded against in the same manner as for refusal to obey any other subpoena or order of the court.

SEC. 9. The secretary of the board shall receive and account for all moneys derived under the provisions of this act, and shall pay the same monthly to the State Treasurer, who shall keep such moneys in a separate fund to be known as the "professional chemists' fund." Such fund shall be kept separate and apart from all other moneys in the treasury, and shall be paid out only by warrant of the State Auditor upon the State Treasurer, upon itemized vouchers, approved by

the chairman and attested by the secretary of the board. All moneys in the "professional chemists' fund" are hereby specifically appropriated for the use of the board. The secretary of the board and any other member or employee of the board as may be designated by the board shall give a surety bond to this State in such sum as the board may determine. The premium on said bond shall be regarded as a proper and necessary expense of the board, and shall be paid out of the "professional chemists' fund". The secretary of the board shall receive such salary as the board shall determine in addition to the compensation and expenses provided for in Section 5. The board may employ such clerical or other assistants as are necessary for the proper performance of its work, and may make expenditures of this fund for any purpose which in the opinion of the board is reasonably necessary for the proper performance of its duties under this act. Under no circumstances shall the total amount of warrants issued by the State Auditor in payment of the expenses and compensation provided for in this act exceed the amount of the examination and registration fees collected as herein provided. Said fund shall be continued from year to year and shall be drawn against only for the purposes of this act.

SEC. 10. The board shall keep record of its proceedings and a register of all applications for registra-

tion, which register shall show (a) the name, age, and residence of each applicant; (b) the date of the application; (c) the place of business of such applicant; (d) his educational and other qualifications; (e) whether or not an examination was required; (f) whether the applicant was rejected; (g) whether a certificate of registration was granted; (h) the date of the action of the board; and (i) such other information as may be deemed necessary by the board.

The records of the board shall be prima facie evidence of the proceedings of the board set forth therein, and a transcript thereof, duly certified by the secretary of the board under seal, shall be admissible in evidence with the same force and effect as if the original were produced.

Annually, as of January first, the board shall submit to the Governor a report of its transactions of the preceding year, and shall also transmit to him a complete statement of the receipts and expenditures of the board, attested by affidavits of its chairman and its secretary.

SEC. 11. A roster showing the names and places of business of all registered professional chemists shall be prepared by the secretary of the board during the month of January of each even numbered year.

Copies of this roster shall be mailed to each person so registered, placed on file with the Secretary of State, and furnished to the clerks of court of all

CHEMISTS' REGISTRATION ACT OF OHIO

counties and the auditors of the principal cities of the state and to the public upon request.

SEC. 12. At any time within eighteen months after this act becomes effective, upon due application therefor and the payment of the registration fee of fifteen dollars (\$15.00) the board shall issue a certificate of registration, without oral or written examination, to any professional chemist, who shall submit evidence under oath satisfactory to the board that he is of good character, has been a resident of the State of Ohio for at least one year immediately preceding the date of his application, and was practicing professional chemistry at the time this act became effective, or has had previous practice and responsible charge of work of a character satisfactory to the board.

After this act shall have been in effect eighteen months, the board shall issue certificates of registration only as provided for in Section 13 or Section 21 thereof.

SEC. 13. The following shall be considered as minimum evidence satisfactory to the board that the applicant is qualified for registration as a professional chemist to wit:

a. Graduation from an approved course in chemistry or chemical engineering of four years or more in a school or college approved by the board as of satisfactory standing; a specific record of an additional four years or more of active practice in

chemical work of a character satisfactory to the board, and indicating that the applicant is competent to be placed in responsible charge of such work; and successfully passing a written, or written and oral examination; or

b. Successfully passing a written, or written and oral examination in chemistry prescribed by the board, and designed to show knowledge and skill approximating that attained through graduation from an approved four-year chemical course; and a specific record of eight years or more of active practice in chemical work of a character satisfactory to the board and indicating that the applicant is competent to be placed in responsible charge of such work.

Every person applying for a certificate of registration as a professional chemist shall submit evidence, satisfactory to the board, that he has completed eight years of training and active practice or eight years of active practice required in Section 13, subparagraphs (a) or (b).

At any time after this act becomes effective the board may accept as evidence, in lieu of a prescribed examination, that the applicant is qualified for registration as a professional chemist, a specific record of fifteen years or more of active practice in chemical work of a character satisfactory to the board and indicating that the applicant is qualified to carry out and supervise chemical work and has had

responsible charge of important work for at least five years.

Chemical experience and training in any of the armed forces of the United States or civilian war services shall be credited as active practice in chemical work in connection with any application for registration as a professional chemist; provided, that such experience and training is of a character satisfactory to the board.

Provided that no person shall be eligible for registration as a professional chemist, who is not of good character and reputation.

In considering the qualifications of applicants, responsible charge of chemical teaching may be construed as active practice in chemical work. The satisfactory completion of each year of an approved course in chemistry or chemical engineering in a school or college approved by the board as of satisfactory standing shall be considered as equivalent to a year of active practice. Graduation in a course other than chemistry or chemical engineering from a college or university of recognized standing shall be considered as equivalent to two years of active practice; provided, however, that no applicant shall receive credit for more than four years of active practice because of educational qualifications in a field other than chemistry or chemical engineering. The mere execution of chemical work devised or planned by a professional chemist, or the carrying out of such work as

a foreman or superintendent shall not be deemed to be active practice in chemical work, unless such work involves independent judgment in chemical practices, or the applicant presents evidence of additional chemical practice of a character satisfactory to the board and indicating that the applicant is competent to be placed in responsible charge of chemical work. Each year of post-graduate study in chemistry or chemical engineering shall be considered equivalent to one year of experience; provided, however, that such study is of a character satisfactory to the board.

The board may permit the applicant for a certificate of registration as a professional chemist to take the prescribed examination in two stages. The first stage of the examination may be taken by the applicant at any time after he has completed four years of the required eight years of active practice or training and active practice. It shall test the applicant's knowledge of fundamental, technical subjects, including chemistry, mathematics and the basic sciences. Satisfactory passage of this portion of the examination shall constitute a credit for the life of the applicant, or until he shall have been registered. If the applicant shall have received a baccalaureate or higher degree in chemistry or chemical engineering from a school or college approved by the board as of satisfactory standing, the board may accept such degree as evi-

CHEMISTS' REGISTRATION ACT OF OHIO

dence in lieu of such examination.

When the applicant has satisfactorily passed the first stage of the examination or otherwise qualified as herein provided, he shall be given an appropriate certificate by the board showing his status as a chemist in training.

The second stage of the examination shall cover the more advanced professional training of chemists as amplified and matured by practical experience and shall test the applicant's ability to apply the principles of chemistry to the actual practice of his profession, and to insure safe operation of chemical plants, processes and projects.

The applicant shall not be eligible to take the second stage of the examination until he has satisfactorily completed the required eight years of active practice or training and active practice. Nothing in this act shall be construed as requiring the applicant to take the examination in two separate stages. He may, at his option, take both stages of the examination at one time after he has completed the requisite eight years of active practice or training and active practice.

Any person having the necessary qualifications prescribed in this act to entitle him to registration shall be eligible for such registration although he may not be practicing his profession at the time of making his application.

SEC. 14. Applications for Registration shall be on forms prescribed

and furnished by the board, shall contain statements made under oath, detailed summary of his technical work showing the applicant's education and shall contain not less than five references of whom three shall be chemists having personal knowledge of his chemical experience.

The registration fee shall be fifteen dollars (\$15.00), five dollars (\$5.00) of which shall accompany the application, the remaining ten dollars (\$10.00) to be paid upon the issuance of the certificate.

Should the board deny the issuance of a certificate of registration to any applicant the initial fee deposited shall be retained as an application fee.

SEC. 15. When oral or written examinations are required, they shall be held at such time and place as the board shall determine. A candidate failing in one examination may apply for re-examination within six months and will be re-examined at the next regularly scheduled examination without payment of additional fee. Subsequent examinations will be granted upon payment of a fee to be determined by the board, and which shall not exceed in amount the original fee. At least two (2) regularly scheduled examinations shall be held annually, in the months of January and July, respectively, and at such other times as determined by the board.

SEC. 16. The board shall issue a certificate of registration upon payment of registration fee as provided

for in this act, to any applicant who, in the opinion of the board, has satisfactorily met all requirements of this act. Certificates of registration shall authorize practice as "professional chemist" and shall show the full name of the registrant, shall have a serial number, and shall be signed by the chairman and the secretary of the board under seal of the board.

The issuance of a certificate of registration by the board shall be evidence that the person named therein is entitled to all the rights and privileges of a registered professional chemist, while the said certificate remains unrevoked.

Each registrant hereunder shall upon registration obtain a seal of the design authorized by the board, bearing the registrant's name and the legend, "registered professional chemist". Specifications, analyses, opinions, and reports issued to the public or filed with public authorities by a registrant shall be stamped with the said seal during the life of the registrant's certificate. But it shall be unlawful for anyone to stamp or seal any documents with said seal after the certificate of the registrant named thereon has been revoked unless said certificate shall have been re-issued.

SEC. 17. A firm, or a co-partnership, or an association may engage in the practice of professional chemistry in this State, provided only such practice is carried on by professional chemists who are registered in this State.

SEC. 18. After the first day of January of the year following adoption of this act, it shall be unlawful for this State, or for any of its political subdivisions, for any county, city, village, township, or school district to engage in the operation of any public work involving the practice of professional chemistry unless the carrying out thereof is supervised by a registered professional chemist; provided, that this section shall not apply to the design, construction, improvement or maintenance of any public work; and provided further, that nothing in this act shall be construed as excluding a professional engineer registered under the provisions of the Engineers and Surveyors Registration Act of Ohio (G.C. Sec. 1083- 1 to 26) from such chemical practice as may be necessary in the lawful practice of professional engineering.

SEC. 19. The following persons shall be exempt from the provisions of this act, to wit:

(a) A person not a resident of and having no established place of business in this State, practicing or offering to practice herein professional chemistry, when such practice does not exceed in the aggregate more than sixty days in any calendar year; provided, such person is legally qualified to practice the said profession in his own state, or country in which the same privilege is extended to professional chemists resident in this State.

CHEMISTS' REGISTRATION ACT OF OHIO

(b) A person practicing or offering to practice professional chemistry in this State, and being legally qualified to practice the said profession in the state or country of his residence, if he believes himself to possess the qualifications for registration prescribed in this act and if he shall have filed with the board an application for a certificate of registration and shall have paid the fee required by this act, but such exemption shall continue only for such time as the board requires for consideration of the application for registration.

(c) An employee or a subordinate of a person holding a certificate of registration under this act, or an employee of a person exempted from registration by classes (a) and (b) of this section; provided, his practice does not include responsible charge or supervision requiring the exercising of independent judgment in chemical matters.

(d) Officers and employees of the Government of the United States while engaged within this state in the practice of the profession of chemistry for said government.

(e) Individuals, firms, and corporations practicing professional chemistry incident to commercial manufacturing operations and research development and testing in connection therewith.

SEC. 20. The board may, upon application therefor, and the payment of a fee of fifteen dollars (\$15.00)

issue a certificate of registration as a professional chemist to any person who holds a certificate of qualification or registration issued to him by proper authority of any state or territory or possession of the United States or any country, provided that the requirements for the registration of professional chemists under which said certificate of qualification or registration was issued do not conflict with the provisions of this act and are of a standard not lower than specified in Section 13 of this act.

SEC. 21. The board shall have the power to revoke the certificate of registration of any registrant who is found guilty of:

(a) The practice of any fraud or deceit in obtaining a certificate of registration;

(b) Any gross negligence, incompetency, or misconduct in the practice of professional chemistry as a registered professional chemist.

Any person may prefer charges of fraud, deceit, gross negligence, incompetency, or misconduct against any registrant. Such charges shall be in writing, and shall be sworn to by the person making them and shall be filed with the secretary of the board.

All charges, unless dismissed by the board as unfounded or trivial, shall be heard by the board within three months after the date on which they shall have been preferred.

The time and place for said hearing shall be fixed by the board, and

a copy of the charges, together with a notice of the time and place of hearing, shall be personally served on or mailed to the last known address of such registrant at least thirty days before the date fixed for the hearing. At any hearing, the accused registrant shall have the right to appear personally and by counsel, to cross-examine witnesses appearing against him and to produce evidence and witnesses in his own defense.

If, after such hearing, three or more members of the board vote in favor of finding the accused guilty, the board shall revoke the certificate of registration of such registered chemist.

The board, for reasons it may deem sufficient, may re-issue a certificate of registration to any person whose certificate has been revoked, providing three or more members of the board vote in favor of such re-issuance. A new certificate of registration, to replace any certificate revoked, lost, destroyed or mutilated, may be issued, subject to the rules of the board, and a charge of two dollars (\$2.00) shall be made for such issuance.

SEC. 22. Any person who shall practice, or offer to practice, the profession of chemistry in this State without being registered or exempted in accordance with the provisions of this act, or any person presenting or attempting to use as his own the certificate of registration or the seal of another, or any person who shall give any false or forged evidence of any

kind to the board or to any member thereof in obtaining a certificate of registration, or any person who shall falsely impersonate any other registrant of like or different name, or any person who shall attempt to use an expired or revoked certificate of registration, or any person who shall violate any of the provisions of this act, shall be guilty of a misdemeanor, and shall, upon conviction, be subject to pay a fine of not less than one hundred dollars (\$100.00), nor more than five hundred dollars (\$500.00).

It shall be the duty of all duly constituted officers of the law of this State, or any political subdivision thereof, to enforce the provisions of this act and to prosecute any persons violating same. The attorney general of the state or his designated assistant shall act as legal adviser of the board and render such legal assistance as may be necessary in carrying out the provisions of this act.

SEC. 23. This act shall not be construed to affect or prevent the practice of any other legally recognized profession; nor shall any other act or law be construed as excluding a professional chemist registered under the provisions of this act from carrying on such chemical practice as may be incident to the practice of such other legally recognized professions.

SEC. 24. All actions and proceedings of the board in carrying out the provisions of this act shall be in strict accordance with the Administrative

CHEMISTS' REGISTRATION ACT OF OHIO

Procedure Act (G.C. Sec. 154-61 to 73).

SEC. 25. If any section or sections of this act shall be declared unconstitutional or invalid, this shall not in-

validate any other sections of this act.

SEC. 26. All laws or parts of laws in conflict with the provisions of this act shall be, and the same are hereby repealed.

The Defense of Animal Research

The following letter concerning the defense of animal research was received:

Dr. Foster D. Snell, president
The American Institute of Chem-
ists:

The National Society for Medical Research was founded under the sponsorship of the Association of American Medical Colleges last spring with the objective of encouraging and advancing research and teaching in Biology, Medicine, Dentistry, Pharmacy, and Veterinary Medicine. The Society's important job is to inform the public regarding the necessity, the humane character, and the accomplishments of animal experimentation.

The formation of the Society was necessary because such cults as the antivivisectionists . . . have for over fifty years assaulted the foundations of scientific medicine, and because today, better financed and organized than ever, they plan to promote restrictive legislation on both national and state levels.

These cults are dangerous for three reasons: (1) Because they

have already restricted research in all but three medical centers in the United States and have the ultimate goal of stopping all medicine based on science; (2) Because every year they force scientists to drop their work in order to fight off hampering legislation; (3) Because the cult serves as a mask for anti-medical activities of the most vicious and dangerous of quacks.

We believe that the American Institute of Chemists has a vital interest in this fight for freedom of scientific research. We invite your organization to join us by becoming a member of the Society. Membership signifies your agreement with our goals and your willingness to aid in our educational program. It carries no financial obligation. You will be interested to know that the American Red Cross and the Chamber of Commerce of the United States are our most recent affiliates.

—A. J. Carlson, President
National Society
for Medical Research

This letter was referred by the National Council to a committee composed of Mr. Lawrence H. Flett, Chairman; Dr. Charles N. Frey, Dr. C. A. Johnson, Dr. Donald B. Keyes, and Dr. Randolph Major. The committee's report was presented at the meeting of the National Council, held on March fourth, and adopted by the Council, as follows:

The American Institute of Chemists cannot help but view with serious apprehension certain activities and proposed legislation that would restrict or prohibit animal research by thoroughly qualified and responsible scientists. This Society knows how essential animal research is to the continued health and happiness of our nation and is clearly informed as to the tremendous benefits that have been derived therefrom.

The Council of The American Institute of Chemists believes that a fully informed public would not support such legislation and desires to give its support to all groups seeking to present the true facts to the public. The Council urges the individual members of the Institute to take an active part in seeing that a clear picture is presented through the press and other organs of public enlightenment, of what animal research truly involves, and what it means both to man and to animals themselves.

Necrology

Lawrence H. Redman

Lawrence V. Redman, retired director of research, Bakelite Corporation, 194 St. Paul Street, St. Catharines, Ontario, died on November 25, 1946, at the age of 67.

Dr. Redman was born in Oil Springs, Ontario, and was educated at Toronto University from which he received the D.Sc. degree. This was followed by four years as a research fellow at the University of Kansas.

In collaboration with co-workers he developed a process for making phenol-aldehyde resins, for the manufacture of which the Redmanol Chemical Products Company was formed. Dr. Redman became president of this company in 1914. When Redmanol Chemical Products Company was consolidated with Bakelite Corporation, Dr. Redman became research director and vice president of Bakelite, until his recent retirement.

Dr. Redman was the author of a number of papers on phenol and phenolic resins.

He was elected president of the American Chemical Society in 1932.

Dr. Redman became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1927, and served as its councilor in the early 1930's.



COUNCIL

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Secretary, Lloyd Van Doren

Vice-president, Joseph Mattiello

Treasurer, Frederick A. Hessel

Honorary Secretary, Howard S. Neiman

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JAMES R. WITHROW

DONALD B. KEYES

JOHN H. YOE

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L. H. FLETT

Niagara

JAMES OGILVIE

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Washington

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Chicago

MARTIN DESIMO

Miami Valley

E. L. LUACES

Baltimore

MAURICE SIEGEL

Los Angeles

RAYMOND J. ABERNETHY

Louisiana

HAROLD A. LEVEY

Northern Ohio

M. J. BAHNSEN

Western Pennsylvania

L. V. CLARK

New Jersey

H. E. RILEY

March Meeting

The 234th meeting of the National Council of THE AMERICAN INSTITUTE OF CHEMISTS was held on March 4th, at 6:00 p.m., at No. 2 Park Avenue, 26th Floor, New York, N.Y. Due to the absence of the president, Dr. Joseph Mattiello, vice president, presided. The following

officers and councilors were present:

H. L. Fisher, L. H. Flett, F. A. Hessel, F. C. Huber, R. E. Kirk, D. B. Keyes, J. Mattiello, H. S. Neiman, H. E. Riley, W. D. Turner, and L. Van Doren. V. F. Kimball and C. P. Neidig were present.

A letter from Dr. Foster D. Snell, president, was read, concerning his

unavoidable absence from the meeting.

Upon motion made, seconded, and carried, the minutes of the previous meeting were accepted.

The secretary reported on the status of the current membership.

The secretary reported that the total number of ballots received on the proposed coalition as of March 4, 1947, was 1396, of which 1191 were ballots in favor of the coalition, 196 were opposed, and 9 ballots were returned without vote.

Upon motion made, seconded, and carried, the report of the treasurer was accepted and ordered placed on file.

Upon motion made, seconded, and carried, the treasurer was requested to send out the bills for the coming fiscal year of the Institute in the full amounts. Should the amount of the dues be changed later, a suitable credit will be given to those who have paid the current dues.

Dr. Mattiello and Mr. Neidig, as chairman and vice chairman of the committee on arrangements for the annual meeting, reported progress and requested suggestions for this program. It was decided that the annual business meeting of the Institute shall begin at 10:00 a.m. on May 2, 1947. At this meeting the proposed coalition between the AIC and the ACS will be discussed.

Mr. L. H. Flett, chairman of the committee to investigate a request

from the National Society for Medical Research, reported that a statement had been prepared which he submitted to the Council:

Upon motion made, seconded, and carried, the approval of the Council was given for the release of this statement, after approval of another member of the committee, who was previously unavailable, is obtained.

The secretary read a letter from the American Institute of Architects, requesting cooperation and exchange of information with the Institute concerning material of interest to both societies.

A copy of a letter from Charles Barban, F.A.I.C., concerning Delaware Senate Bill No. 75, was read. Upon motion made, seconded, and carried, the secretary was requested to send a vigorous letter of protest to those concerned with the bill and to send a copy of the original letter to Dr. F. C. Huber, chairman of the Pennsylvania Chapter.

The secretary read a letter from the council of the New York Chapter, to the effect that the New York Chapter Council wished to postpone the final vote on the coalition until the 1948 annual meeting. Upon motion made, seconded, and carried, the secretary was asked to transmit this letter for the information of those negotiating the coalition.

Upon motion made, seconded, and carried, the following new members were elected.

COUNCIL

Fellows

Dollinger, Jack H.

Assistant Technical Service Director, Glyco Products Company, Inc., 26 Court Street, Brooklyn, New York.

Gardiner, Eli

Owner-director, Gardiner Laboratories, 71-50 Austin St., Forest Hills, N. Y.

Member

Kays, William T. II

Chemist, American Cyanamid Company, 168 Mt. Olivet Street, Newark, N. J.

Associate

Young, James Francis

Research assistant, Oakite Products, Inc., 22 Thames Street, New York, N. Y.

Reinstated As Fellow

Pickering, Harry S.

Technical director, Industrial Coatings Company, Route 3, Box 1500, Miami 38, Fla.

Dr. H. L. Fisher, chairman of the committee to prepare By-laws for the proposed Institute of the ACS, reported that these By-laws had been arranged, but that there were certain questions on which he would like to have the advice of the Council. After discussion, and suggestions, these By-laws were completed.

There being no further business, adjournment was taken.

CHAPTERS

Washington Chapter

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Vice-President, R. E. Rostenbach

Secretary, C. W. Whittaker

1705 Lanier Place, N. W.,

Washington, D. C.

Treasurer, H. I. Feinstein

Council Rep., Eduard Farber

An informal dinner in honor of Dr. Foster D. Snell, president, A.I.C. was held at Freres Restaurant preceding the meeting of the Washington Chapter on January 28th.

Dr. Snell spoke on "Chemistry—a Profession," and also discussed the proposed coalition of the INSTITUTE with the American Chemical Society. Many questions concerning the effect of such a coalition on the INSTITUTE, particularly on the status of the present chapters and how they would operate after the coalition were asked and discussed at some length.

The members of the Washington Chapter who were present went on record in favor of the coalition by a vote of 17 to 1 on a motion made by Mr. L. N. Markwood.

Dr. Farber announced that the next meeting will be held jointly with the Washington Chemical Society when a suitable date can be arranged.

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Dr. Foster D. Snell, president A.I.C., spoke before the Virginia Blue Ridge Section of the American Chemical Society, Hollins College, Virginia, on February 15th.

The survey of the patent policies of educational and non-profit research institutions, being prepared by the National Research Council, will be published in June.

The American Institute of Physics, 57 East 55th Street, New York 22, N. Y., plans to publish a journal covering news about physicists and their activities. The new publication will be issued monthly.

Volume 1, Number 1 of *Chemical Engineering Progress*, the new publication of the American Institute of Chemical Engineers, appeared in January. F. J. Van Antwerpen is editor, with offices at 50 East 41st Street, New York 17, N. Y.

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For Your Library

THE CHEMICAL SENSES. By R. W. Moncrieff; *John Wiley & Sons*, (Reprint, first published 1944 in Great Britain). 424 pp. \$4.50.

This volume takes an inventory of our knowledge of the chemical aspects of the sense perceptions. Aside from making available a considerable amount of new information, this book is very valuable in bringing together a wealth of information which was previously scattered through various magazines, journals, etc., and the author has substantiated his text thoroughly with these references.

The functions of the chemical senses in life, the anatomy of the sense receptors, and the experience of gustatory, olfactory, etc., senses are covered in full detail, followed by chapters on the classification and theory of odor, the relation between chemical constitution and sensory experience, and physical properties of odorous materials. Chapters on the practical side of the subject, such as the constituents and the composition of perfumes and flavors are also included.

Considering the title of the book, this reviewer is somewhat surprised by the absence of any reference to the chemical side of the sense of sight. After all, while variations in depth of shade, tone, and brilliance are predominantly physical phenomena, there

is a close relationship between chemical constitution and the appearance of color in the visible region of the spectrum. In this respect may be mentioned a correlative between conjugated systems and color already observed by Graebe and Liebermann (Berichte 1868) and the quinone theory of Armstrong. However, is not the sense of sight itself conditioned by chemical changes in the retina?

The book is very readable and, while its greatest value will be to workers in the perfume, food, and flavor industries, it makes interesting reading for those not thus affiliated. A glossary, a bibliography, and author and exhaustive subject indices are included.

—*William H. Van Delden, F.A.I.C.*

THE PATH OF SCIENCE. By C. E. Kenneth Mees. *John Wiley & Sons, Inc.* 1946. 250 pp. \$3.00.

Dr. Mees in this book attempts to deduce the future of Science, both as a field of knowledge and a source of practical development, from history. His theory of history is the well-known one of Cycles which is to be found in such diverse sources as Plato and Spengler. This always presents a fascinating subject for speculation. However, the plethora of historical facts is so great that by judicious

selection almost any theory can be successfully maintained.

The validity of Dr. Mees' theory does not in the least affect the highly authoritative opinions which he expresses in his last three chapters, which are concerned respectively with the production of scientific knowledge, applied science and industrial research, and the relation of science to society.

Dr. Mees writes in a most scholarly and lucid fashion, which makes his book a pleasure to read. His own career, which includes scientific discoveries of the first order as well as industrial developments of great importance, all as part of his continuing employment as a Director of Research, enables him to speak with unquestionable authority on these matters.

The book is well-worth reading by anyone who is interested in the social aspects of chemistry.

—Karl M. Herstein, *F.A.I.C.*

COSMIC RADIATION. Fifteen lectures edited by W. Heisenberg. Translated by T. H. Johnson. *Dover Publications*, New York, 1946. 192 pp. \$3.50

These studies were prepared in honor of the 75th birthday of Arnold Sommerfeld in 1943, profound teacher of atomic physics in Germany. On the day which the book was intended to commemorate, and before more than a few copies had been distributed, bombs fell on Berlin, destroying the plates and the stock of printed volumes. The translation of

one of the few copies extant is by one of our own leading authorities on cosmic ray research, T. H. Johnson, chief physicist, Ballistics Research Laboratory, Aberdeen Proving Ground, and it is so smooth and idiomatic that one is unaware most of the time that a translation, and not an original in English, is being read.

An understanding of the contents requires a thorough knowledge of atomic physics. In fact, the work could be subtitled, "Mechanics of the Meson," and as difficult as is the mathematics, it does not suffice for present needs, "since we have apparently now gone beyond the limit of applicability of present schemes; processes with several particles, non-linearity of equations, and such things may create an entirely new situation for which our mathematical apparatus is in no way adapted." (Meson theory of the deuteron, p. 123).

Significant to the chemist, however, is the production of nuclear disruption by cosmic radiation, a phenomenon which has been observed in photographic emulsions since 1937, and which increases in frequency with elevation above sea level. In these nuclear disruptions, fast neutrons as well as protons are emitted. "It is thus shown that the frequencies of the protons, as well as those of the neutrons in the lower atmosphere, can be attributed to the nuclear disruptions. The hypothesis that such particles pene-

trate into this region from external space is, accordingly, superfluous."

There are many interesting articles, some touching on the excitation of neutrons by cosmic radiation and the methods of detecting fast and slow neutrons by their effects. Lack of space precludes further discussion of this interesting sidelight on the status of atomic physics in Germany from 1941 to 1943.

—E. E. Butterfield, F.A.I.C.

NARCOTICS AND DRUG ADDICTION.

By Erich Hesse. Translated by Frank Gaynor. *Philosophical Library*. 220 pp. 6" x 9". \$3.75.

A great hiatus exists between the psychological aspects of the action of drugs and their pharmacodynamics, both of which are described. The vivid coloring and emotional experiences would indicate a form of self or group hypnosis, superimposed on the physiological response to the drug. How else is it possible to account for the fortitude induced in Moham-medan warriors by Khat Tea; the sensation of well-being, good humor, excitation, and comfort by Betel chewing, or the truth-telling candor induced by the "Piule" of Mexico?

The author makes an arbitrary division of habit-forming drugs into Narcotics and Stimulants, which is a convenient treatment to recommend the strongest social action against the use of narcotics and heavy taxation to limit the use of stimulants. A

sense of futility is intimated when it is realized that indulgence leading to drug addiction is done to gain a subjective feeling of well-being associated with forgetting the troubles of the world for a while.

—John A. Steffens, F.A.I.C.

BACTERIAL CHEMISTRY AND PHYSIOLOGY. By John Roger Porter; *John Wiley and Sons, Inc.*, 1946; 1073 pp. Price \$12.00.

The extremely rapid developments in the field of bacterial chemistry and physiology have resulted in a need for a modern, up-to-date book dealing with this branch of science. Professor Porter's book fulfills this need in an admirable fashion since it is an excellent review of much of the existing knowledge in the field.

Of particular interest to the chemist are those chapters dealing with the physico-chemical properties of bacteria, the effects of chemical and physical agents on bacteria, the chemical composition of microorganisms, and the metabolism of carbon and nitrogen compounds by microorganisms.

Despite the somewhat high price, the book should serve as an excellent text for both undergraduate and graduate courses dealing with the chemistry and physiology of microorganisms. In any event, it is a good source of reference for chemists and biologists.

—Irving P. Hammer, M.A.I.C.

W. H. Anderson Company, 524 Main Street, Cincinnati 2, Ohio, law book publishers, announces the publication of "Trade-Mark Act of 1946," by H. A. Toulmin, Jr. The delivered price of single copies is \$5.00; of ten or more copies \$4.00 each.

Polytechnic Institute of Brooklyn, Brooklyn, New York, is now accepting applications for the Du Pont postgraduate fellowship in chemistry covering the 1947-48 academic year. The fellowship provides tuition and laboratory fees with a stipend of \$1,200 for a single man and \$1,800 for a married man.

Industry reports of the Department of Commerce which were formerly distributed without charge have now been placed on a paid subscription basis. These reports include *Chemicals and Drugs* (\$2.50), *Fats and Oils* (\$1.00), *Leather* (\$.60), and *Pulp and Paper* (\$2.25).

"Pentaerythritol Uses—A Bibliography," 440 pages referring to 354 patents; extensive editorial comments and lengthy summaries. \$15.00 per copy. Available from Burrell and Neidig, Inc., 115 Broadway, New York 6, N.Y.

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Civil Service examinations are announced for positions of Physicist (P-6 through P-8) at salaries from \$7,102 to \$9,975 a year, in the War Department, Navy Department, and other Federal agencies in New Jersey and New York. Applications should be obtained from the Director, Second U. S. Civil Service Region, Federal Building, Christopher Street, New York 14, N. Y.

Magnus, Mabee & Reynard, Inc., 10 Debrosses Street, New York 13, N. Y. have issued their 1947 price list and catalog covering essential oils and other materials.

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—Harry Woodburn Chase,
Chancellor, New York University

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Inventions man needs most, according to Don Wharton, are: (1) a source of economical and controllable atomic energy; (2) a technic for controlling weather; (3) cheap and efficient transmission of power; (4) a method of making a good low-cost fabric, and (5) the mass-production of good houses.

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"From War to Peace — Civilian Production Achievements in Transition." This is the final issue of the "Monthly Report on Civilian Production" which ceased publication when CPA was absorbed into the Office of Temporary Controls.

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The Office of Alien Property, Department of Justice, is exhibiting abstracts of 33,000 enemy patents, at the Southern Machinery and Metals Exposition, Atlanta, Georgia, Municipal Auditorium, April 14-17th.

Meeting Dates

A.I.C. Council Meetings

Meetings of the National Council of THE AMERICAN INSTITUTE OF CHEMISTS are to be held on the following dates:

April 21, 1947

May 2, 1947

June 17, 1947

APR. 3rd—Pennsylvania Chapter, A. I. C. Engineers' Club, 1317 Spruce Street, Philadelphia. Speaker, J. C. Research and Development Department, Atlantic Refining Company. "Petroleum Fuels and Lubricants."

MAY 2nd—Annual Meeting, the American Institute of Chemists. Hotel Commodore, New York, N. Y. Medal award to Dr. M. L. Crossley, F.A.I.C.

MAY 9th—New York Chapter, A.I.C. 26th Floor, No. 2 Park Avenue, New York, N. Y. Speaker to be announced.

JUNE—Pennsylvania Chapter, A.I. C. Outing. (To be announced).

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Chicago Lecture Series

An eight-weeks' series of popular lectures, sponsored by the Museum of Science and Industry of Chicago and the Chicago Technical Societies Council, will be held Sunday afternoons during April and May in the auditorium of the Museum. Dr. Herman S. Bloch, F. A. I. C., of Universal Oil Products Company, arranged the series. The Chicago Chapter of The American Institute of Chemists is a co-sponsor of the May 18th lecture. Dr. Gustav Egloff, F. A. I. C., will give the April 27th lecture on "New Developments in Chemistry."

Hampel with Armour Research Foundation

Clifford A. Hampel, F.A.I.C., is now inorganic chemist in the Ceramics and Minerals Division of the Armour Research Foundation in Chicago. He was formerly assistant chief chemist of Cardox Corporation, Chicago.



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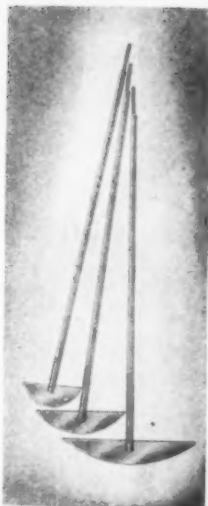
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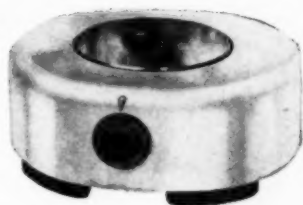
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